

Sustainable Transportation Fuels: A 2005 California Policy Perspective

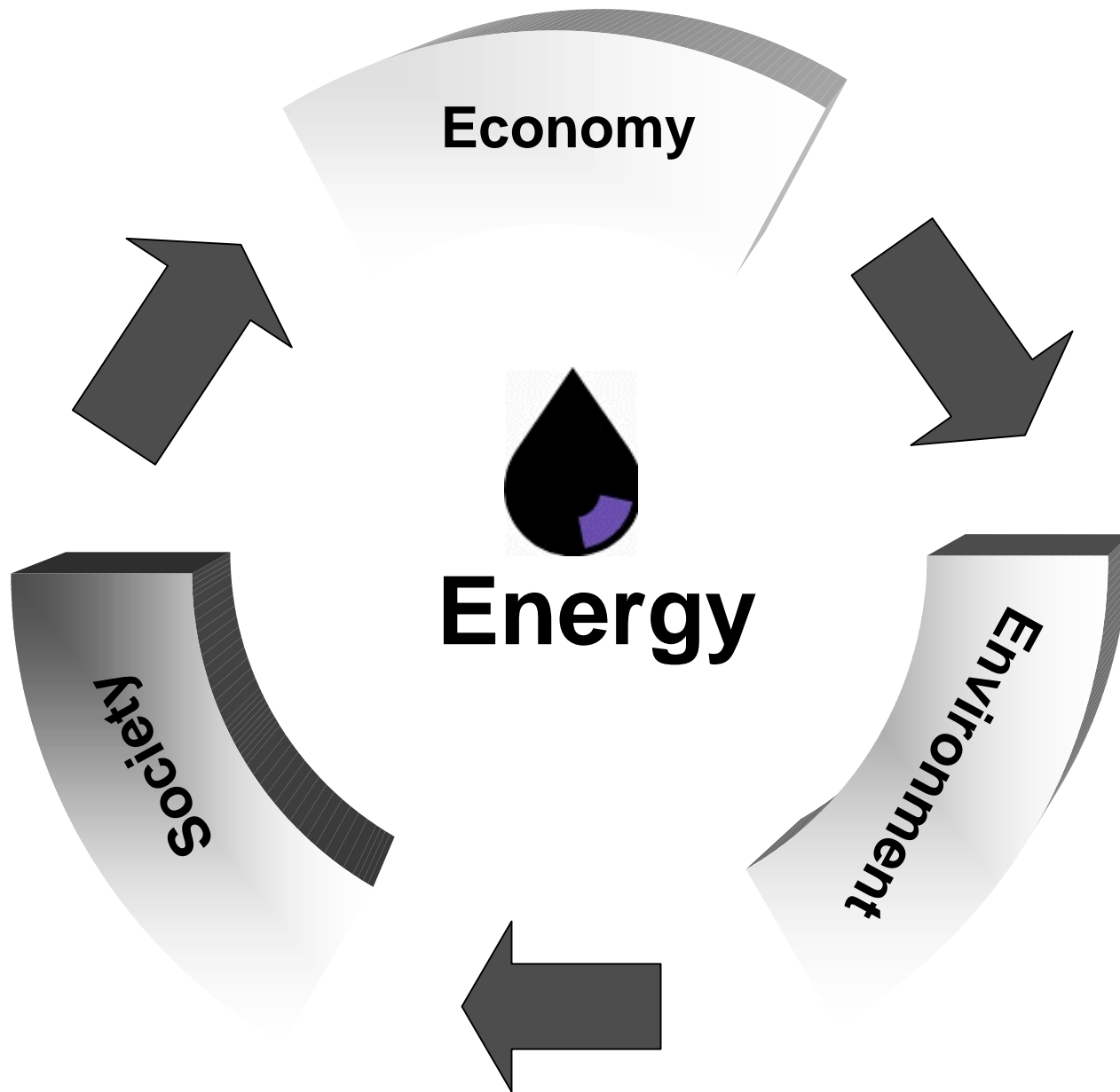
XV *International Symposium on Alcohol Fuels Technology*
San Diego, California
September 26-28, 2005

James D. Boyd, Commissioner
California Energy Commission



California – An Island?



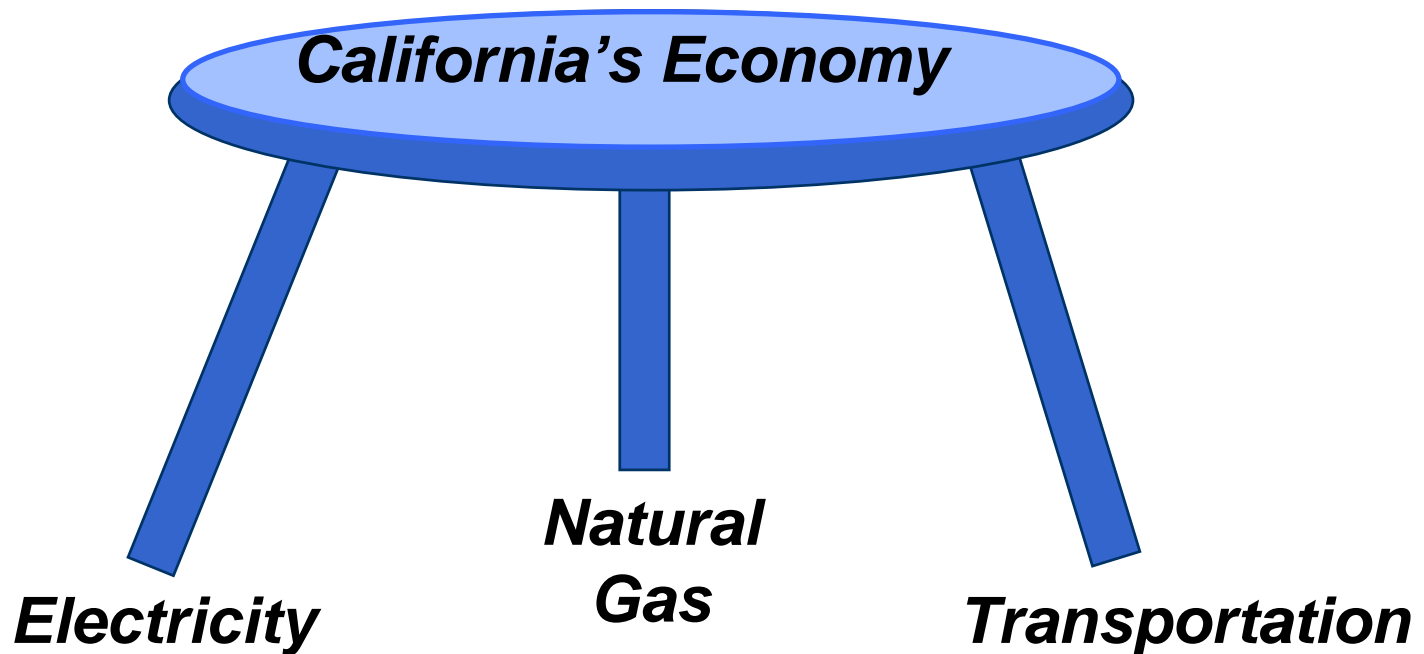


Sustainable Energy

*Meeting the Needs of the Present
Without Compromising Ability of Future
Generations to Meet Their Own Needs*



Three-Legged Energy Stool



The Nation-State of California

- *5th largest economy in the world*
- *5th largest consumer of energy in the world*
- *2nd largest consumer of gasoline and diesel in the world – only the US consumes more*
- *Population – expected to grow from 36 million now to 45 million by 2025*
- *Approximately 26 million registered vehicles*
- *\$150 million for gasoline and diesel spent daily*



California Fuel Appetite

- *Nearly 18 billion gallons of gasoline and diesel fuel used annually – a 50% increase from 20 years ago*
- *Average annual demand for gasoline and diesel between now and 2025 to grow by 0.9 percent and 2.9 percent*
- *“Vehicle Miles Traveled” expected to increase from 320 billion miles in 2005 to 451 billion miles by 2025*

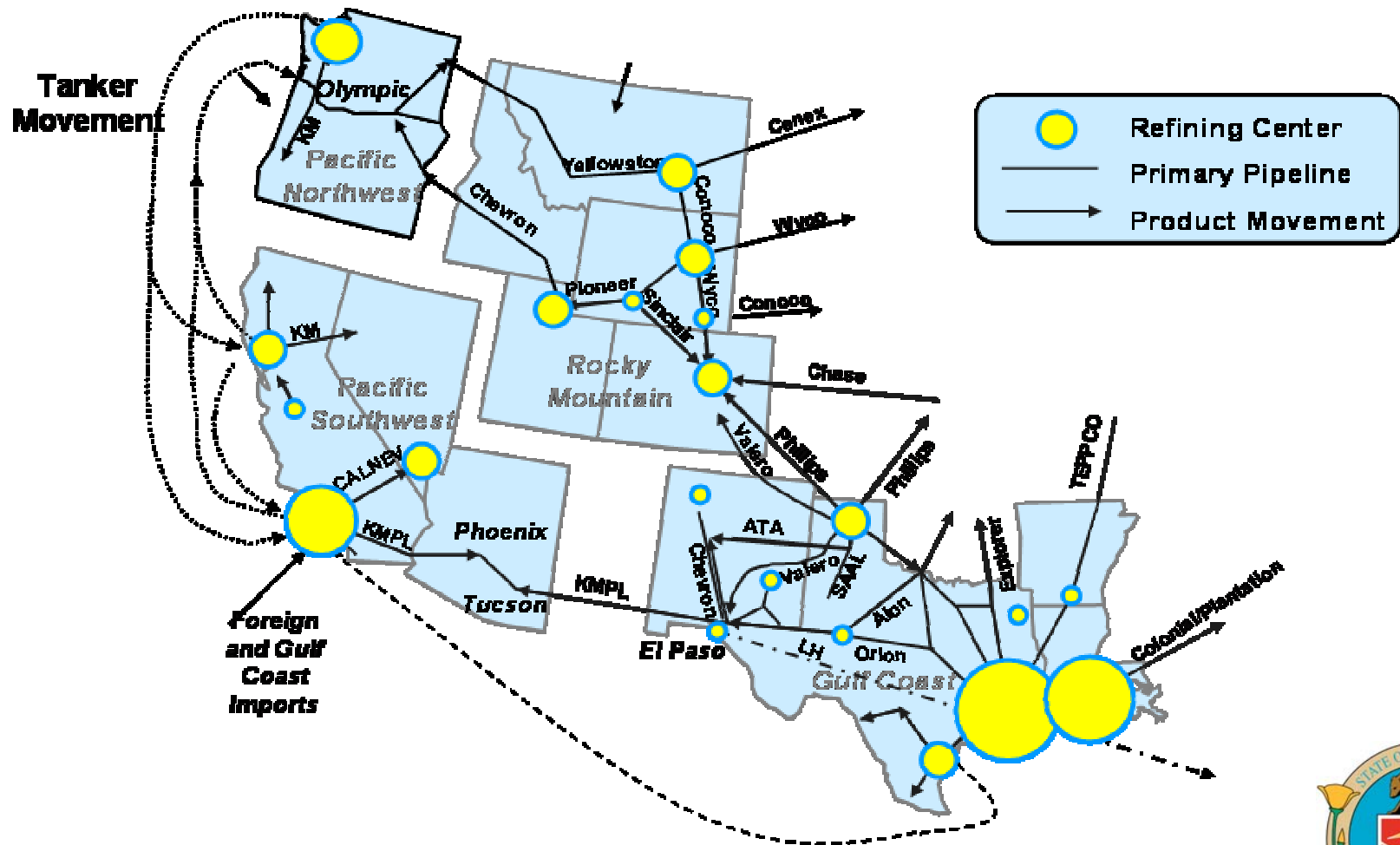


California Context

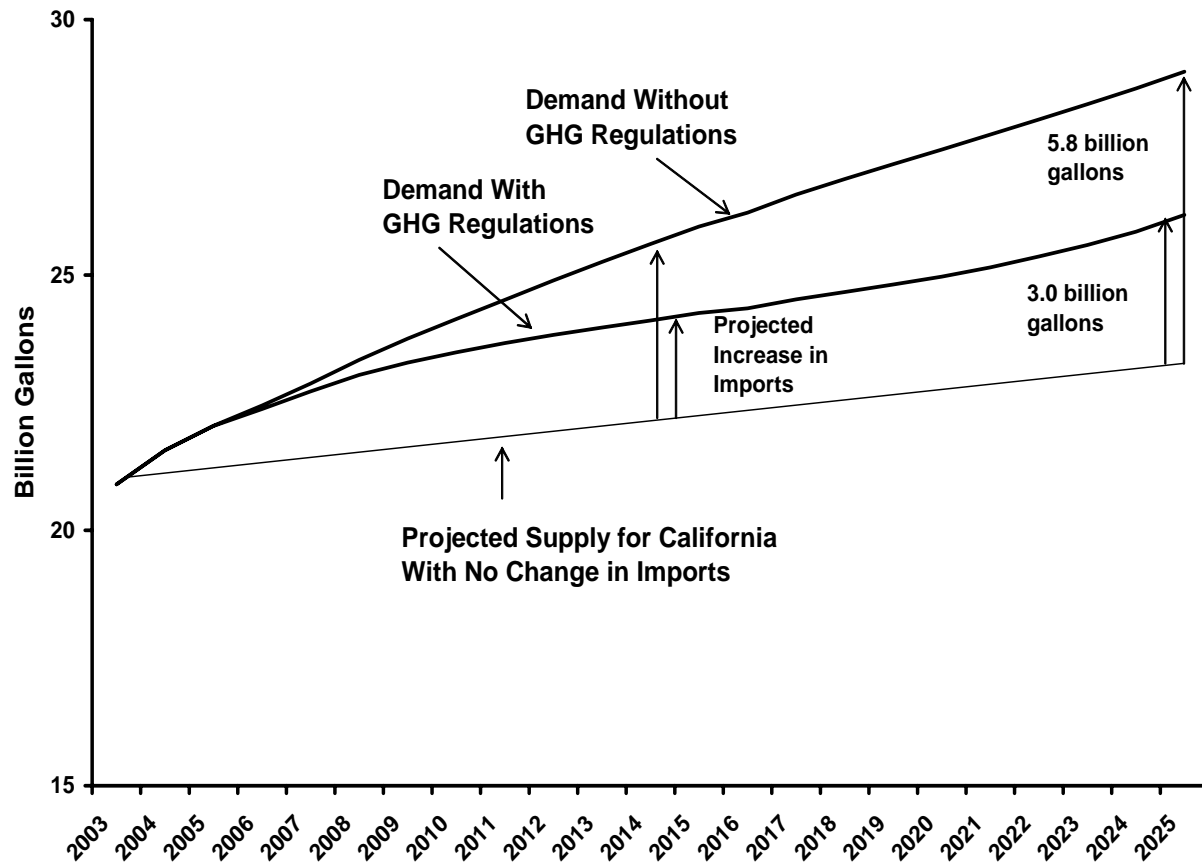
- *History of economic growth with an aggressive record of environmental protection*
- *90 percent of all Californians breathe unhealthy, polluted air*
- *Transportation accounts for approximately 50 percent of greenhouse gas emissions and nearly 80 percent of NOx emissions*



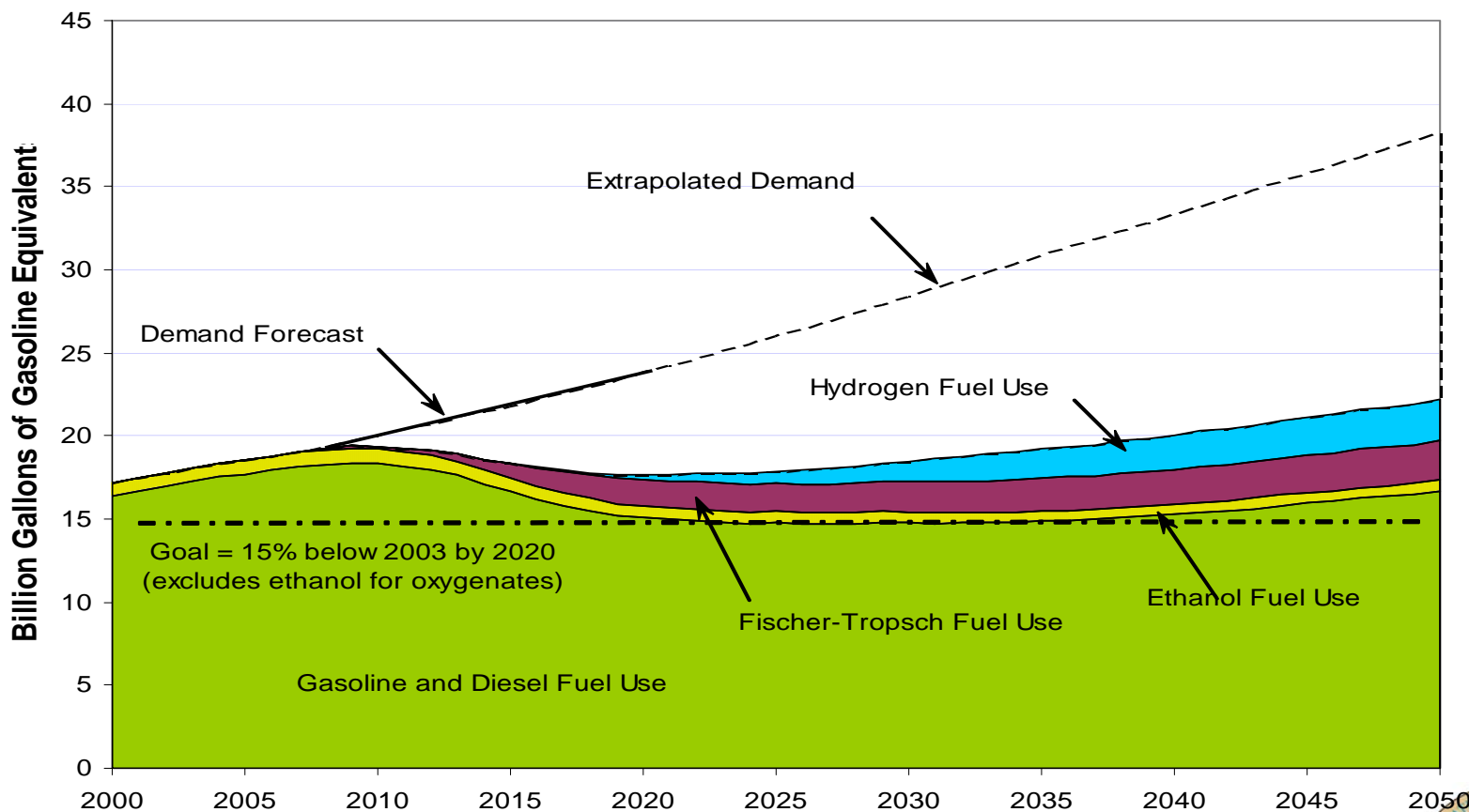
California's "Island" Market



The Heart of the Problem



Impact on Petroleum Use



2003 Integrated Energy Policy Report Transportation Fuel Goals

- Reduce gasoline and diesel demand to 15% below 2003 levels by 2020*
- Double combined fuel economy requirements of new cars and light trucks to 40 mpg*
- Increase use of non-petroleum fuels to 20% by 2020 and 30% by 2030*
- Increase fuel cell vehicles to 10 percent of new sales by 2020 and 20 percent by 2030*



2003 IEPR Key Findings

- *Reducing dependence on petroleum fuels produces economic, environmental, and energy security benefits*
- *Increasing energy efficiency of existing and new vehicles is our best investment option*
- *In the long-term, alternative fuels augment our fuel supply, create beneficial competition, and lead to reduced environmental damage*



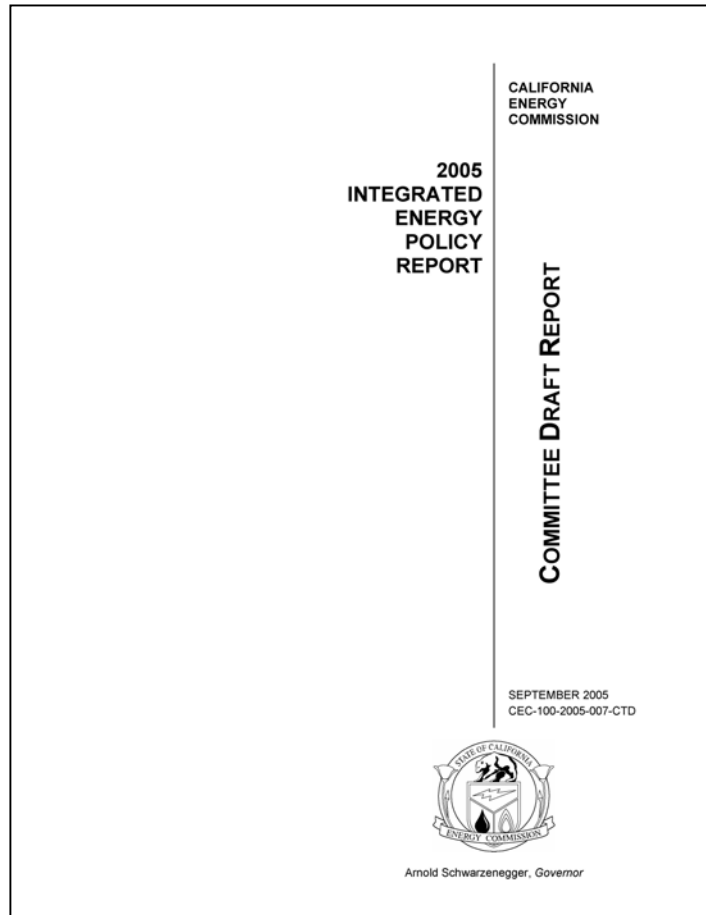
Governor's Direction

The Energy Commission should take the lead in crafting a workable long-term plan by March 31, 2006, that will result in the significant reduction of gasoline and diesel use and increase the use of alternative fuels so that the State is working toward a set of realistic, achievable objectives with identifiable and measurable milestones”

From California Governor Arnold Schwarzenegger's review of the 2003 and 2004 Integrated Energy Policy Reports – Letter to the Honorable Don Perata, President pro tempore of the Senate, dated August 23, 2005



2005 Integrated Energy Policy Report



Integrated assessment of

- *Transportation
Fuels*
- *Electricity*
- *Natural gas*



2005 IEPR Recommendations

- *Establish flexible overarching policies to simultaneously reduce petroleum fuel use, increase fuel diversity and security, and reduce emissions of air pollution and greenhouse gases*
- *Establish California Renewable Fuel Standards – up to 20 percent renewable content in all diesel sold up to 10 percent renewable content in all gasoline sold*
- *Sponsor transportation technology and fuels research and development*



2005 IEPR Recommendations

- *Establish a procurement requirement for alternative fuels for the State of California's fleet of vehicles*
- *Develop and certifying E-85-compatible fuel dispensing systems and implementing a process to expedite the permitting of E-85 stations*
- *Investigate the feasibility of requiring all or a portion of new cars sold in California to be FFVs*



2005 IEPR Recommendations

- *Establish a collaborative state/industry working group to identify fuel infrastructure changes needed to increase production and distribution of E-85 gasoline and prepare a strategic/business plan to exploit opportunities to incorporate E-85 into the existing retail fueling system*
- *Sponsor a consumer notification and education program promoting the availability of FFVs and E-85 fuel*



2005 IEPR Recommendations

- *Evaluate incentive programs in other states to determine their applicability and usefulness for creating an E-85 retail infrastructure in California*
- *Support research for the development of technologies to convert biomass resources to ethanol*



Alcohol Plays a Critical Role

PAST

- *Ethanol/Methanol Fleet Demonstrations*

PRESENT

- *Ethanol is 5.7% of most gasoline used in California – approximately 900 million gallons per year*
- *Minimal E-85 use through 3 E-85 fueling stations. 250,000 flexible fuel vehicles (FFVs)*

NEAR TERM

- *Use of ethanol will likely continue in California despite repeal of Federal oxygenate requirement*
- *Increase E-85 fueling station infrastructure. Maintain current rate of FFV sales (up to 1-2% of gasoline market)*

LONGER TERM

- *Up to 10% blend in all gasoline could increase ethanol demand to over 1.5 billion gallons per year*
- *Widely available E-85 fueling infrastructure, significant market share of FFV E-85*
- *E-Diesel: Limited demonstrations, possible 10% blend with diesel in the long term?*



California Energy Commission Hearing

Draft 2005 Integrated Energy Policy Report

Transportation Issues

**September 29, 2005, 1:00 p.m.
California Energy Commission**

Docket 04-IEP-1

**1516 9th Street
Sacramento, CA 95814**

http://www.energy.ca.gov/2005_energypolicy/notices/2005-09-15_committee_hearings.html

